

Serial No. 10/630,267
67028-014

IN THE CLAIMS:

The following is a complete listing of the pending claims along with status.

1-18. (CANCELLED)

19. (PREVIOUSLY PRESENTED) A method of molding a molded article comprising:

- a) introducing molten material into a mold cavity;
- b) receiving molten material into a passage adjacent said mold cavity by displacing a movable member comprising a face defining a portion of the mold cavity;
- c) determining a volume of material received within the passage according to a relationship between material shrinkage properties and mold injection pressures; and
- d) displacing molten material from the adjacent passage toward said mold cavity with said movable member responsive to a biasing force exerted by a plurality of bevel springs to compensate for changes in volume caused by solidification of the molten material.

20. (ORIGINAL) The method of claim 19, wherein said step c) comprises compensating for local volume changes by pushing molten material from said adjacent passage into said mold cavity.

21. (ORIGINAL) The method of claim 19, wherein said step c.) comprises maintaining a desired material volume locally by pushing molten material into the mold cavity.

22. (ORIGINAL) The method of claim 21, wherein the molten material is displaced from the passage proportionate to shrinkage of the molten material during solidification.

23. (CANCELLED)

24. (ORIGINAL) The method of claim 19, comprising the step of applying a force with said movable member to limit the amount of molten material received within the adjacent passage.

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25. (ORIGINAL) The method of claim 24, comprising the step of applying a force with said movable member to push molten material from said adjacent passage proportionate to a reduction in local molten material volume within the mold cavity.

26-29. (CANCELLED)

30. (PREVIOUSLY PRESENTED) A method molding a molded article comprising:

- a) introducing molten material into a mold cavity;
- b) receiving a predetermined amount of molten material into a passage adjacent said mold cavity;
- c) displacing said predetermined amount of material from said passage and into said mold cavity during solidification of said molten material; and
- d) determining an amount of said molten material received within said passage according to a relationship between material shrinkage and mold injection pressures.

31. (PREVIOUSLY PRESENTED) The method as recited in claim 30, wherein said step d) comprises the step of determining a height loss caused by material shrinkage according to the relationship:

$$h_{\text{new}} = \frac{V_{\text{shrink}}}{\pi * (D_{\text{boss}}/2)^2}$$

Where: h_{new} = height loss

V_{shrink} = Volume of shrink

D_{boss} = Diameter of movable member.

32. (PREVIOUSLY PRESENTED) The method as recited in claim 30, wherein said step d) comprises the step of providing for travel of a movable member within the passage substantially equal to twice the determined amount of height loss caused by material shrinkage.

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33. (PREVIOUSLY PRESENTED) A method molding a molded article comprising:
- a) introducing molten material into a mold cavity;
 - b) receiving a predetermined amount of molten material into a passage adjacent said mold cavity;
 - c) displacing said predetermined amount of material from said passage and into said mold cavity during solidification of said molten material;
 - d) providing for travel of a movable member within said passage substantially equal to twice a determined amount of height loss caused by material shrinkage; and
 - e) determining an amount of said molten material received within said passage according to a relationship between material shrinkage and mold injection pressures comprising determining a biasing force for biasing movement of said movable member against injection pressures such that movement of said movable member within said passage is substantially equal to twice the amount of height loss caused by material shrinkage.
34. (PREVIOUSLY PRESENTED) The method as recited in claim 33, wherein said biasing force is determined as a percentage of molding injection pressures.

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35. (PREVIOUSLY PRESENTED) A method of compensating for material shrinkage during a plastic molding, said method comprising the steps of:

- a) introducing molten plastic material into a mold cavity;
- b) determining a volume of material required to compensate for material shrinkage in a localized region according to a relationship between material shrinkage properties of the plastic material and injection pressures utilized to introduce molten plastic into the mold cavity; and
- c) displacing a movable member into a passage adjacent the mold cavity to received the determined volume of plastic material; and
- d) expelling a portion of the determined volume back into the mold cavity during solidification of the plastic material.

36. (PREVIOUSLY PRESENTED) The method as recited in claim 35, including the step of biasing the movable member toward a position where a face of the movable member is flush with a surface of the cavity prior to introduction of molten plastic.

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37. (CURRENTLY AMENDED) ~~The method as recited in claim 35, including the step of~~
A method of compensating for material shrinkage during a plastic molding, said method
comprising the steps of:

- a) introducing molten plastic material into a mold cavity;
- b) determining a volume of material required to compensate for material shrinkage in a
localized region according to a relationship between material shrinkage properties of
the plastic material and injection pressures utilized to introduce molten plastic into the
mold cavity;
- c) determining a biasing force for biasing the a movable member against the injection
pressure such that displacement of the movable member provides for receipt of a
volume of plastic material greater than or equal to two times the volume determined
to compensate for material shrinkage;
- d) displacing a movable member into a passage adjacent the mold cavity to received the
determined volume of plastic material; and
- e) expelling a portion of the determined volume back into the mold cavity during
solidification of the plastic material.